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THE WEATHER OF THE MONTH.

By Mr. P. C. DAY, Assistant Chief, Division of Meteorological Records.

PRESSURE.

The distribution of mean atmospheric pressure for January, 1908, over the United States and Canada, is graphically shown on Chart VI, and the average values and departures from the normal are shown for each station in Tables I and III.

The pressure during January, as in the preceding month, was comparatively high over the southwestern portion of the United States, and diminished by rather steep gradients northward into Canada, and by gradients less pronounced eastward toward the Atlantic.

The region of highest pressure, 30.20 to 30.25 inches, embraced the central portion of the middle Plateau region, while the lowest pressure, about 29.80, prevailed over the Canadian Maritime Provinces.

The average pressure was above the normal over nearly the entire Rocky Mountain and Plateau districts, and below the normal from the Missouri and Mississippi valleys eastward to the Atlantic coast, and also by small amounts on the immediate Pacific coast.

The diminution of pressure northward and eastward as in the preceding month gave a preponderance of southerly surface winds with their modifying influence over the greater part of the United States and all southern districts of Canada.

A comparison of Chart VI, sea-level pressure, for the current month with that for January, 1907, together with temperature data for the two months, shows the marked influence upon the weather of any displacement of the more or less permanent areas of high and low pressure.

During January, 1907, high pressure prevailed north of the United States, the general drift of the surface winds over the northern portions of the United States was from the interior cold regions of British America, and the month was one of severe cold with frequent and heavy snowfall along the entire northern border, being especially severe in the States from Montana to the Great Lakes.

During the current month, reverse conditions prevailed, high pressure developed over the central Plateau region, pressure over the Canadian districts was comparatively low, the surface drift along the northern border was from southerly regions and the month was one of unusual warmth.

TEMPERATURE.

January, 1908, like the preceding month, was characterized by unusual warmth over practically all portions of the United States. Warm weather was almost continuous until near the end of the month, when a cold wave of considerable severity overspread the more northern district.

The temperature averaged unusually high over the Great Plains from Texas northward into Canada, ranging from about 5° above the normal in the first named district to from 15° to 20° above over the upper Missouri and Red River of the North valleys, and the northwestern provinces of Canada.

Over the Atlantic and Pacific coast districts the departures were not so marked, ranging from 1° to 3° above the normal.

Over a narrow strip embracing eastern Alabama and western Georgia and the Appalachian Mountain districts, as far north as Maryland, there was a slight deficiency.

A rather singular coincidence in connection with the above is that in the preceding month the only portion of the United States showing temperatures below normal was embraced within practically the same narrow limits as that shown for January.

Maximum temperatures ranged from slightly above 80° in the southern portions of Florida, Texas, and California, to slightly less than 50° over New England, the Lake region, and the elevated mountain districts.

Despite the unusual warmth over the northern districts, a few periods of rather cold weather were experienced in the more southern districts, the line of freezing temperature, with accompanying frost, extending to central Florida, nearly to the coast line of Texas from Galveston to the Rio Grande, and to exposed points in southern Arizona and California.

Minimum temperatures from 15° to 25° below zero were recorded in the Rocky Mountain region from central Colorado northward, over the upper Missouri Valley and New England; while over the northern portions of North Dakota, Minnesota, Wisconsin, and Michigan minimum temperatures from -30° to -40° were recorded.

PRECIPITATION.

The distribution of precipitation during January, 1908, is graphically shown on Chart IV by appropriate shading or by figures representing the actual amount of fall over districts the topography of which is too varied to admit of approximately correct shading.

The month as a whole was one of deficient rainfall. Over a small area embracing the Appalachian Mountain region from Maryland southward to the central Gulf coast, and the greater part of California, there was an excess of precipitation ranging from 1 to 4 inches, but over the remaining districts of the United States there was a general deficiency.

Over the extreme southern portion of Florida, eastern North Carolina, central New England, portions of the Lake region, the Ohio and middle Mississippi valleys, Louisiana and eastern Texas, western Oregon and the Puget Sound district of Washington, the deficiency ranged from 1 to 2 inches.

The general lack of precipitation and the wide extent of territory covered by excess of temperature occurring in conjunction are conditions that may well be classed as unusual for a midwinter month in the United States.

SNOWFALL.

The distribution of the monthly amounts of snowfall is graphically shown on Chart VII, and the depth on ground at end of the month on Chart VIII.